



SERVICE BULLETIN

from: TRIO-KENWOOD COMMUNICATIONS, INC.

TS-120S

#827

SUBJECT: TS-120S VFO STABILITY

DATE 6/6/80

(SUPERCEDES 7/9/79 BULLETIN)

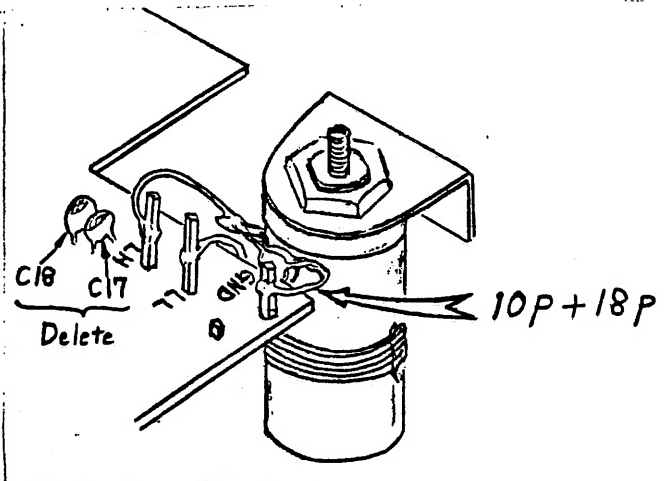
VFO drift characteristics may be improved by changing component values and location in the VFO.

This change applies to serial numbers before 0010001.

NOTE: DO NOT disturb lead dress or component placement while working inside the VFO.

1. Remove the VFO unit by four 3mm hex head bolts.
2. Withdraw out the front panel and unplug the leads.
3. Remove the VFO cover by five Phillips head screws.
4. Remove C17, C18 from the PCB. These may be cut flush to the board.
5. Reposition the Ground terminal for the Variable Capacitor by heating the post and pushing it through to the opposite side of the PCB.
6. Install paralleled 10pF Green and 18pF Yellow caps from the bottom tank coil terminal (LH) to the modified Ground post. Position the caps near the coil, not the PCB. Make certain the ground lead doesn't touch the coil or coil mounting.
7. To reassemble, perform steps 3,2,1. Snug all VFO case screws. A later complaint of frequency jump would indicate a loose VFO shell.

NEW PARTS: 10pF CC45SG1H100J
18pF CC45RG1H180J



Analog Dial Calibration:

1. Turn the main dial fully CCW. The red cursor should line up with the VFO mark on the sub-dial. If it does not, remove the main knob, loosen set screws and line up the scale start point to the red cursor.
2. Turn the main knob to 50 KHz analog. Adjust the aluminum slip sub-dial to line up with any one of the larger black dial marks.
3. Note the digital error. If it is MORE than 2 KHz adjust the VFO trimmer cap TC1 (center under the seal tape) to exactly 50.0 on the digital readout.
4. Turn the main knob to 450 analog. If the digital error is less than 2 KHz it is in spec. If the digital error is greater, proceed:

For instance if the digital error is 14.454.0 (plus 4 KHz), multiply the error times 4 (16 KHz) and adjust the VFO trimmer cap to the desired frequency (14.450.0) LESS the error, or 14.434.0. Next adjust the VFO inductor L10 (front under the seal tape) back up to the desired frequency of 14.450.0.

5. If the error in step 4 was in the minus direction, reverse the direction of correction adjustment in step 4.
6. VFO linearity final check: The digital readout and analog dial should agree to within ± 2 KHz at every 100 KHz dial point.

